

AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

1. (Previously presented) A waveform generating method comprising the steps of:

storing a plurality of partial waveforms in a partial waveform memory;

storing property information on respective ones of the partial waveforms stored in the partial waveform memory, in a property information memory, the property information being indicative of at least one characteristic of performance relating to a corresponding one of the partial waveforms that is included in a phrase, the characteristic being obtained by actual performance of the phrase;

detecting a partial waveform having property information corresponding to inputted sounding control information by referring to the property information memory according to the inputted sounding control information, and reading out the detected partial waveform from the partial waveform memory ;

processing the readout partial waveform according to the property information and the sounding control information; and

generating a waveform corresponding to the sounding control information.

2. (Previously presented) A performance data processing method comprising the steps of:

storing property information on respective ones of a plurality of partial waveforms in a property information memory, the property information being indicative of at least one characteristic of performance relating to a corresponding one of the partial waveforms that is included in a phrase, the characteristic being obtained by actual performance of the phrase;

comparing characteristics of respective ones of notes included in performance data with the property information stored in the property information memory to detect an optimum partial waveform for a characteristic of each of the notes;

assigning designation data for designating the detected partial waveform to each of the notes;
and

storing performance data having the designation data assigned thereto.

3. (Original) A waveform generating method for use in reproducing the performance data having the designation data assigned thereto stored by a performance data processing method according to claim 2, comprising the steps of:

storing a plurality of partial waveform in a partial waveform memory;

reading out a partial waveform from the partial waveform memory according to the designated data assigned to each of the notes to be reproduced when reproducing the notes having the designation data assigned thereto according to the performance data; and

generating a waveform corresponding to each of the notes based upon the read out partial waveform.

4. (Currently amended) A waveform generating method comprising the steps of:

storing performance information corresponding to real-time performance;

generating accompanying tones by automatic performance or automatic accompaniment according to a tempo clock;

~~reproducing the stored performance information according to the tempo clock; and~~

inputting performance events in real time while the accompanying tones are generated;

detecting a performance event that follows one of the inputted performance events based on the stored performance information according to the tempo clock; and

generating waveforms according to the inputted performance events and the detected performance event , ~~which are performed in real time synchronously with the accompanying tones and the reproduced performance information.~~

5. (Currently amended) A waveform selection apparatus comprising:

a partial waveform memory that stores a plurality of partial waveforms;

a database that stores property data representing characteristics of ~~two tones~~ a present tone corresponding to each of the partial waveforms stored in said partial waveform memory and ~~consisting of a tone corresponding to each of the partial waveforms and~~ a preceding tone that precedes the present tone in a phrase that includes the partial waveform; and

a retrieving device that retrieves the property data from said database according to characteristic data of ~~two tones consisting of an inputted present tone to be generated by performance and an inputted preceding tone to be generated by performance before the inputted present tone~~ a present tone designated by inputted present performance and a preceding tone designated by preceding performance inputted before the present performance to extract at least one partial waveform having corresponding to property data close to the characteristic of the two tones designated by the present performance and the preceding performance to generate a waveform corresponding to the present tone based on the extracted at least one partial waveform data of the ~~inputted two tones as a partial waveform for sounding the inputted present tone to be generated by performance.~~

6. (Currently amended) A waveform selection apparatus comprising:

a partial waveform memory that stores a plurality of partial waveforms;

a database that stores property data representing characteristics of ~~two tones~~ a present tone corresponding to each of the partial waveforms stored in said partial waveform memory and ~~consisting of a tone corresponding to each of the partial waveforms and a following tone~~ a following tone that follows the present tone in a phrase that includes the partial waveform; and

a retrieving device that retrieves the property data from said database according to characteristic data of ~~two tones consisting of an inputted present tone to be generated by performance~~ a present tone designated by inputted present performance and a following tone ~~to be inputted and generated by performance before the inputted present tone~~ designated by following performance inputted after the present performance to extract at least one partial waveform ~~having corresponding to~~ property data close to the characteristic of the two tones designated by the present performance and the following performance to generate a waveform corresponding to the present tone based on the extracted at least one partial waveform data of the inputted present tone and the following tone to be inputted as a partial waveform for sounding the inputted present tone to be generated by performance.

7. (Currently amended) A waveform data recording apparatus comprising:

an automatic performing device that reproduces tones based on performance data comprising a plurality of notes relating to a phrase to be recorded, wherein a player hears the reproduced tones and sounds a phrase along with the reproduced tones;

a waveform recording device that records a phrase waveform sounded by the player ~~performed simultaneously with the reproduced tones; and~~

a waveform data processing device that divides the phrase waveform into partial waveform data according to a characteristic of each of the notes in performance data.

8. (Original) A waveform data recording apparatus according to claim 7, wherein said waveform recording device records the phrase waveforms in synchronism with performance timing of said automatic performing device.

9. (Currently amended) A waveform data recording apparatus according to claim 7, wherein said waveform data processing device assigns the characteristic ~~information on~~ of each of the notes corresponding to the partial waveform data as property information to the partial waveform data.

10. (Original) A waveform data recording apparatus according to claim 9, comprising a device that creates a tone color set from a partial waveform pool in which selected partial waveform data selected from the partial waveform data is pooled, and a partial waveform management database composed of the property information assigned to respective ones of the selected partial waveform data pooled in the partial waveform pool.

11. (Previously presented) A recorded waveform data reproducing apparatus comprising:

a storage device that stores a tone color set from a partial waveform pool in which selected partial waveform data selected from the partial waveform data is pooled, and a partial waveform management database composed of property information assigned to respective ones of the selected partial waveform data pooled in the partial waveform pool;

a detecting device that retrieves data from the partial waveform management database in the tone color set by characteristic information on respective notes in performance data to detect optimum partial waveform data for each of the notes from the partial waveform pool;

a designation data inserting device that embeds designation data for designating the optimum partial waveform data detected by said detecting device to each of the notes into the performance data; and

a reproducing device that automatically reproduces the performance data in which the designation data is embedded by said designation data inserting device, according to the optimum partial waveform data designated by the designation data.

12. (Previously presented) A recorded waveform data reproducing apparatus comprising:

a storage device that stores a tone color set from a partial waveform pool in which selected partial waveform data selected from the partial waveform data is pooled, and a partial waveform management database composed of property information assigned to respective ones of the selected partial waveform data pooled in the partial waveform pool;

a detecting device that retrieves data from the partial waveform management database in the tone color set by information on respective performance event data that have occurred, to detect optimum partial waveform data for each of the performance event data from the partial waveform pool; and

a reproducing device that reproduces the performance event data according to the optimum partial waveform data detected by said detecting device.

13. (Previously presented) A recorded waveform data reproducing apparatus comprising:

a storage device that stores a tone color set from a partial waveform pool in which selected partial waveform data selected from the partial waveform data is pooled, and a partial waveform management database composed of property information assigned to respective ones of the selected partial waveform data pooled in the partial waveform pool;

a detecting device that retrieves data from the partial waveform management database in the tone color set by characteristic information on respective notes in performance data read in advance to detect optimum partial waveform data for each of the notes from the partial waveform pool; and

a reproducing device that is responsive to occurrence of performance event data corresponding to respective ones of the notes in the performance data, for reproducing performance tones corresponding to the respective ones of the notes according to the optimum partial waveform data detected by said detecting device.

14. (Previously presented) A waveform generating method according to claim 1, wherein the property information comprises pitch, intensity, length, and pitch ratio between a present tone corresponding to a partial waveform and a following tone.

15. (Previously presented) A waveform generating method according to claim 1, wherein the sounding control information comprises property of a present tone corresponding to a partial waveform and a preceding tone, and

wherein said detecting step comprises detecting a partial waveform that has property information corresponding to the property of the preceding tone and the present tone.

16. (Previously presented) A waveform generating method according to claim 1, wherein the sounding control information comprises:
- pitch, intensity, and length of a present tone corresponding to a partial waveform;
 - pitch, intensity, and length of a preceding tone; and
 - pitch ratio and intensity ratio between the present tone and the preceding tone.
17. (Previously presented) A waveform generating method according to claim 15, wherein the pitch ratio is calculated according to a predetermined expression based on the pitch of the preceding tone and the pitch of the present tone.
18. (Previously presented) A waveform generating method according to claim 15, wherein the intensity ratio is calculated according to a predetermined expression based on the intensity of the preceding tone and the intensity of the present tone.
19. (Previously presented) A performance data processing method according to claim 2, wherein the property information comprises pitch, intensity, length, and pitch ratio between a present tone corresponding to a partial waveform and a following tone.
20. (Previously presented) A performance data processing method according to claim 2, wherein the designation data comprises of a meta event and a system exclusive message.
21. (Previously presented) A performance data processing method according to claim 2, wherein the designation data is inserted prior to the event data of the performance data.

22. (Previously presented) A recorded waveform data reproducing apparatus according to claim 11, wherein the designation data comprises of a meta event and a system exclusive message.

23. (Previously presented) A recorded waveform data reproducing apparatus according to claim 11, wherein the designation data is inserted prior to the event data of the performance data.